

REPORT ON BOILERS.

No. 52530

Received at London Office

1 JUN 1932

Date of writing Report

19

When handed in at Local Office

24

5

19

31

Port of

Glasgow

No. in
Reg. Book.

Survey held at

Glasgow

Date, First Survey

29. 9. 31

Last Survey

23-5-

1932

(Number of Visits 150)

Tons

Gross 5395

Net 3195

on the new steel 915 "HARMATRIS"

Master

Built at

Port: Glasgow

By whom built

Lithgows Ltd

Yard No.

853

When built

1932

Engines made at

Glasgow

By whom made

Danie Rowan & Co Ltd

Engine No.

942

When made

1932

Boilers made at

Glasgow

By whom made

Danie Rowan & Co Ltd

Boiler No.

942

When made

1932

Nominal Horse Power

502

Owners

J & C. Harrison Ltd

Port belonging to

London

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Lithgows Ltd

(Letter for Record (S) (R))

Total Heating Surface of Boilers

1850 sq ft

Is forced draught fitted

yes

Coal or Oil fired

coal

No. and Description of Boilers

one single ended

Working Pressure

220

Tested by hydraulic pressure to

380

Date of test

18-2-32

No. of Certificate

19095

Can each boiler be worked separately

yes

Area of Firegrate in each Boiler

510

No. and Description of safety valves to each boiler

Two Improved High Lift

Area of each set of valves per boiler

per Rule

6.56 sq ft

as fitted

Pressure to which they are adjusted

225

Are they fitted with easing gear

yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

2'-0"

Is oil fuel carried in the double bottom under boilers

no

Smallest distance between shell of boiler and tank top plating

2'-6"

Is the bottom of the boiler insulated

yes

Largest internal dia. of boilers

13'-3 1/16"

Length

11'-6"

Shell plates: Material

steel

Tensile strength

29-33 tons

Thickness

1 3/8"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end

inter.

long. seams

DBS TR

Diameter of rivet holes in

circ. seams

F 1 3/16" B 1 3/8"

Pitch of rivets

F 3.156" B 3.767"

Percentage of strength of circ. end seams

plate

F 62.3 B 63.5

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate

F 43.4 B 48.8

Working pressure of shell by Rules

220

Thickness of butt straps

outer

3 1/2"

inner

1 3/2"

No. and Description of Furnaces in each Boiler

Three Deighton 3 C

Material

steel

Tensile strength

26-30 tons

Smallest outside diameter

3'-2 9/32"

Length of plain part

top

✓

Thickness of plates

crown

4 1/4"

Description of longitudinal joint

welded

Dimensions of stiffening rings on furnace or c.c. bottom

Working pressure of furnace by Rules

244

End plates in steam space: Material

steel

Tensile strength

26-30 tons

Thickness

1 3/16"

Pitch of stays

18" x 16 1/2"

How are stays secured

DN

Working pressure by Rules

220

Tube plates: Material

front

steel

Tensile strength

26-30 tons

Thickness

15/16"

25 3/32"

Mean pitch of stay tubes in nests

9'-6"

Pitch across wide water spaces

14"

Working pressure

front

229

back

236

Girders to combustion chamber tops: Material

steel

Tensile strength

28-32 tons

Depth and thickness of girder

at centre

2 @ 7 1/8" x 7/8"

Length as per Rule

31 1/2"

Distance apart

8 1/4"

No. and pitch of stays

in each

2 @ 10"

Working pressure by Rules

226

Combustion chamber plates: Material

steel

Tensile strength

26-30 tons

Thickness: Sides

3/4"

Back

23/32"

Top

3/4"

Bottom

3/4"

Pitch of stays to ditto: Sides

10" x 8 1/4"

Back

10" x 8"

Top

10" x 8 1/4"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

221

Front plate at bottom: Material

steel

Tensile strength

26-30 tons

Thickness

15/16"

Lower back plate: Material

steel

Tensile strength

26-30 tons

Thickness

13/16"

Pitch of stays at wide water space

13 1/16"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

220

Main stays: Material

steel

Tensile strength

28-32 tons

Diameter

At body of stay,

3" & 2 3/4"

No. of threads per inch

6

Area supported by each stay

305 & 285 sq in

Working pressure by Rules

256 & 230

Screw stays: Material

steel iron

Tensile strength

26-30 tons 21 1/2 tons

Diameter

At turned off part,

1 7/8"

No. of threads per inch

9

Area supported by each stay

82.5 sq in

Working pressure by Rules 258 Are the stays drilled at the outer ends ☒ Margin stays: Diameter { At turned off part, or Over threads 2" / Working pressure by Rules 263
No. of threads per inch 9 Area supported by each stay 94 sq in
Tubes: Material Iron External diameter { Plain 3" / Stay 3" Thickness 8 w.g. 1/4 7/16 3/8 7/16 No. of threads per inch 9
Pitch of tubes 4 7/8 x 4 3/16 Working pressure by Rules 250 Manhole compensation: Size of opening in shell plate 19 1/2 x 15 1/2 Section of compensating ring 9 1/4 x 1 1/2 No. of rivets and diameter of rivet holes 32 @ 1 3/8
Outer row rivet pitch at ends 9 7/16 Depth of flange if manhole flanged 3" Steam Dome: Material none
Tensile strength Thickness of shell Description of longitudinal joint
Diameter of rivet holes 5/8 Pitch of rivets Percentage of strength of joint { Plate Rivets
Internal diameter 5 1/2 Working pressure by Rules Thickness of crown No. and diameter of stays
How connected to shell Inner radius of crown Working pressure by Rules
Size of doubling plate under dome Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell

Type of Superheater none Manufacturers of { Tubes Steel castings
Number of elements Material of tubes Internal diameter and thickness of tubes
Material of headers Tensile strength Thickness Can the superheater be shut off and the boiler be worked separately
Is a safety valve fitted to every part of the superheater which can be shut off from the boiler
Area of each safety valve Are the safety valves fitted with easing gear Working pressure as per Rules
Pressure to which the safety valves are adjusted Hydraulic test pressure: tubes, castings and after assembly in place Are drain cocks or valves fitted to free the superheater from water where necessary
Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with yes

The foregoing is a correct description,
for David Rowan & Co. Ltd.
Arch. W. Grierson Manufacturer.

Dates of Survey { During progress of work in shops - - -
while building { During erection on board vessel - - -
Are the approved plans of boiler and superheater forwarded herewith yes
(If not state date of approval.)
SEE ACCOMPANYING MACHINERY REPORT
Total No. of visits 100

Is this Boiler a duplicate of a previous case no If so, state Vessel's name and Report No.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

The workmanship and materials are good.
The boiler has been constructed under special survey in accordance with the Rules, satisfactorily fitted in the vessel and its safety valves adjusted.

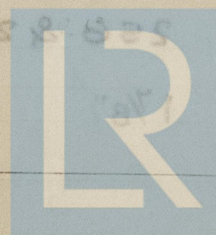
Survey Fee £ 19 When applied for,
Travelling Expenses (if any) £ 19 When received,

L. C. Davis

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 31 MAY 1932

Assigned SEE ACCOMPANYING MACHINERY REPORT.



© 2021

Lloyd's Register Foundation